IN THE SPECIFICATION

Please amend the specification as follows:

Replace the paragraph spanning pages 1-2, between page 1, line 24, and page 2, line 20 of the specification with the following:

~~This~~ In accordance with one embodiment, this object is achieved by ~~the characterizing features of the mutually parallel main claims 1, 8, 9, and 10. According to claim 1, the object is achieved by~~ the following process steps: the current through the sensor is switched off for a short period during a first half wave and a first test value is determined, then the current through the sensor is switched off for a short period during a second half wave having a different polarity and a second test value is determined, whereupon an average is formed of the two test values, and the zero point is determined by means of the average value in that a weighted sum of the average value and the value assumed up to that time for the sensor zero point (Vx) is formed. A reliable determination of the zero point, also denoted sensor zero point hereinafter, is possible when the current in the sensor itself is

known by some other method. For this purpose, the current supply is switched off or interrupted by deactivation of all power transistors during operation for a short period not visible to the human eye, for example during the positive current half wave. A current scanning void is thus created. It can be achieved thereby that the current in the sensor drops to zero within a few microseconds. A suitable time period is, for example, 100 µs. This time period is sufficiently long for reliably bringing the current in the sensor to zero and in addition renders possible a substantial decay of response phenomena in the filters of the current measuring circuit. A full response, however, takes infinitely long, so that now only residual values of an earlier measurement are active. A first test value is now determined. To compensate for the effect of residual values of earlier measurements, the switch-off action is repeated for the same duration in one of the subsequent half waves having a different polarity. The residual value now has a negative sign. A second test value is thus determined. In both cases, however, the sensor zero point is present as a constant component, so that an average value of the two supplies an improved estimation for the zero point

error, also denoted deviation from zero hereinafter, as a sensor offset or offset error. Once the sensor offset has been finally and correctly determined, no further corrections are provided.

Replace the paragraph spanning pages 3-4, between page 3, line 25, and page 4, line 4 of the specification with the following:

Fig. 2 shows a voltage signal 5 of a sensor which is a representation of the lamp current 1 and which is symmetrical with respect to a zero line 6. The zero line 6, also denoted real zero line below, passes through the zero point V0 of the sensor, also denoted real zero point V0 of the sensor below. This means that the line through the zero point V0 represents an output signal of the sensor that is actually obtained for a zero current value. At moment t1, the voltage 5 within the sensor starts to drop exponentially from a value V2 to a value V3 owing to the influence of filters and bandwidth limiters, which value V3 is reached after a period of Δt. At moment t2, the voltage 5 within the sensor starts ~~dropping~~ rising exponentially from a value -V2 to a value -V3, which value -V3 is reached after a period of Δt. The values V3 and -V3 represent residual values of former measured values.

Assuming that a value already placed in a memory or stored on the basis of an earlier measurement, also denoted assumed zero point below, is identical to V0, the two values V3 and -V3 will exactly cancel each other out. A correction of the zero point is not necessary. The absolute values of the residual levels V3 and -V3 are identical for the two half cycles 3 and 4.

Replace the paragraph on page 4, between lines 13-28 of the specification with the following:

Fig. 4 shows the voltage signal 15 of a sensor with the real zero line 6 and the assumed zero line 7. During the first half cycle 3, the voltage 15 starts dropping exponentially from a value V5 to a value V6 at moment t1. The value V6 is reached after a time duration of Δt just before the lamp current 1 is switched on again, the distance of V6 to the assumed zero line 7 being measured and stored. In the second, negative half cycle 4, the voltage 15 starts ~~dropping~~ rising exponentially from a value -V8 to a value -V7 at moment t2. This value -V7 is reached after a time duration of t just before the lamp current is switched on again, the distance of -V7 to the assumed zero line 7 also being measured and stored. The

distances Vx - V6 and Vx - (-V7) are added together, divided by two, possibly weighted, and added to the value Vx. The resulting new value for Vx now lies closer to the correct value V0 than the previous value for Vx. When the procedure is repeated several times, the difference between V0 and the value of Vx becomes increasingly smaller until the correct sensor zero point has been determined. This procedure is also denoted the determination, definition, or compensation of the sensor zero value V0 or the determination of the deviation. A single measuring cycle suffices in the case in which the sensor signal has already become fully stabilized at the moment of measurement.